

ABSTRACT

An automatic tissue sampling apparatus for use with a biopsy needle set having an inner needle and an outer cannula is provided. The apparatus includes a housing defining an interior cavity and having a forward end defining an opening for passage of the inner needle and outer cannula. A pair of carriers are each slidably disposed within the interior cavity of the housing and have a portion configured to support one of the inner needle and the outer cannula. A spring is disposed within the interior cavity in operable engagement with each carrier. The springs have a cocked position in which the mechanism stores potential energy and a firing position in which the mechanism releases the potential energy to drive the corresponding carrier toward the forward end of the housing. A cocking mechanism is operable to sequentially move the first driving mechanism to its cocked position and the second driving mechanism to its cocked position. The cocking mechanism includes a manually operated cocking lever positioned outside the housing for single handed manipulation while holding the housing. A force transmission mechanism is operably coupled between the cocking lever and the carriers and configured so that the force required to manually depress the cocking lever to force the springs to the cocked positions does not increase as the springs are compressed.